

REMARKS/ARGUMENTS

Original independent claim 1 and claims 2-7 as well as new claim 10 and additional claims 1-15 remain in this application for examination.

Corrected Drawings:

Corrected drawings which comply with the standards of United States Patent Office practice are attached hereto.

Claim Objections:

The term "centering" has been corrected in claim 3 and the insertion edges have been distinguished by reciting "a first insertion edge", "a second insertion edge" and in claim 7 "an insertion edgedisposed opposite the first insertion edge."

Claim Rejections Under 35 U.S.C. §112:

Paragraph 7-11 of the Office Action each recite separate reasons for rejections under 35 U.S.C. §112, second paragraph. As is evident by the attached amendments to claims 1-7 each of these rejections under 35 U.S.C. §112, second paragraph has been addressed.

Claim Rejections Under 35 U.S.C. §102:

Claim 1 has been rejected under 35 U.S.C. §102(b) as being anticipated by the following several references taken individually; Miyake et al. '635, Willis '707, Millot et al. '698 and Boe '039.

Paragraph 13 applies Miyake et al. '635 against claim 1. Applicants respectfully traverse this rejection because Miyake et al. '635 fails to disclose each of the elements recited in claim 1. Miyake et al. does not disclose a support rail 2. This is evident upon considering Fig. 1 which schematically shows only a structure 4 which is described as "liquid and signal connectors 4." There is no indication in Fig. 1 that the element 4 is a support rail attached to a support plate. One can not determine from Fig. 1 of Miyake et al. '635 just what the item 4 is attached to. Clearly it might be merely proximate the structure behind it and there is no disclosure in Miyake et al. that the "liquid

and signal connectors 4" provide a support rail attached to a support plate. Likewise, Fig. 11 does not disclose that the liquid and signal connectors 4 comprises a support rail attached to a support plate. Moreover, neither Fig. 1 nor Fig. 11 shows a support rail with an insertion slot. Fig. 1 does disclose a space between upper and lower components, but neither of these components is disclosed as a support rail attached to a support plate. There is nothing in the disclosure of Miyake et al. '635 to support a rejection of anticipation under 35 U.S.C. § 102. Rather, an interpretation of Miyake et al. '635 has anticipating claim 1 requires one skilled in the art to read into Miyake et al. structure claimed by Applicants, which structure does not exist in Miyake et al. Accordingly, it is respectfully requested that the rejection of claim 1, as anticipated by Miyake et al. '635, be withdrawn.

In paragraph 14, claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Willis '707. Applicants respectfully traverse this rejection. Willis '707 is directed to an electro-pneumatic assembly used as a control. There is no disclosure in Willis '707 of connecting exterior fluid line connections to associated connections through at least one outside surface of a plate-like microcomponent. Rather, in Willis the connections are to cylindrical control devices 55 which are clearly not within the plate element 14. The plate element 14 is clearly a mounting board with only electrical connectors along one edge. There are no connections in Willis '707 for transferring fluid materials between the mounting board 14 and the fluid connections 32 of Willis '707. Accordingly, it is respectfully submitted that Willis '707 should be withdrawn as a reference against Applicants claims.

In paragraph 15, claims 1, 5 and 7 are rejected under 35 U.S.C. § 102(b) as anticipated by Millot et al. '698. Applicant respectfully traverses this rejection. Millot et al. '698 is not directed to plate-like microcomponents which receive fluid material for chemical reactions within the plate-like microcomponents, but is rather directed to thermal conduction for cooling high density electronic cards by using a fluid in a slot 50 that cools a "thermal conductor 55" that is inserted into the slot 50. There is no teaching in Millot et al. that fluid travels from the slot 50 into the electronic cards.

In paragraph 16, claim 1 has been rejected as anticipated by Boe '039. Applicants respectfully traverse this rejection because Boe '039 merely discloses high density printed circuit boards with no disclosure of fluid being transmitted to and from the circuit boards, wherein the circuit boards are used for chemical reactions that occur there within. Clearly, in Boe '039 there are

no chemical reactions within the circuit boards which reactions are associated with fluids transmitted to and from the interiors of the boards.

Claim Rejections Under 35 U.S.C. §103:

In paragraph 19 of the Office Action, the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made. To the best of his knowledge, the undersigned attorney affirms the Examiner's presumption.

Claims 2 and 4 have been rejected under 35 U.S.C. §103 as being unpatentable over Willis '707. Applicants respectfully traverse this rejection.

Claims 2 and 4 are depended from claim 1 and further limit the invention of claim 1. As previously stated there is no disclosure in Willis of connecting exterior fluid line connections to associated connections through at least one side of a plate-like microcomponent. Moreover, the printed circuit board 14 of Willis is not constructed and arranged to carry out chemical reactions. There is no discussion in Willis of carrying out chemical reactions at all. This is because Willis is directed to and discloses an electro-pneumatic assembly used as a control. Clearly, claims 2 and 4 add limitations to claim 1 and therefore can not be obvious over a reference which does not disclose what claim 1 recites. Accordingly, it is respectfully submitted that claims 2 and 4 are patentable over Willis '707 for the same reasons that claim 1 is patentable thereover. In essence there are no connections in Willis '707 for transferring fluid materials between a mounting board 14 and the fluid connections 32 of Willis. Applicant's claim 1 and claims 2 and 4 depended from claim 1, require this limitation.

Claim 3 has been rejected as unpatentable over Millot et al. '698 in view of Johnson '292. Applicants respectfully traverse this rejection.

While Johnson '292 teaches using spring components at one end of an insertion slot, Johnson '292 does not cure the deficiencies of Millot et al. '698 as a reference against Applicant's claims. Millot et al. '698 teaches thermal conduction cooling for high density electronic cards, wherein fluid in a slot cools a thermal conductor that extends from the cards into the slot. There is no teaching in Millot et al. '698 that fluid travels from the slot 50 into the electronic cards. Moreover, there is clearly no teaching in Johnson '292 of chemical reactions occurring within a plate-like components.

Accordingly, it is respectfully requested that this rejection be withdrawn.

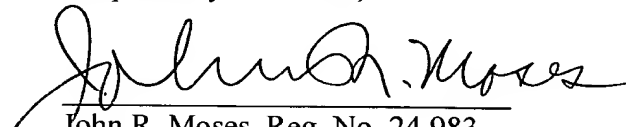
Claim 6 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Millot et al. '698. Applicant respectfully traverses this rejection. As has been previously pointed out, Millot et al. fails to teach that fluid travels from the slot 50 into the electronic cards. Rather, in Millot et al. fluid in the slot 50 cools a thermal conductor which is inserted into the slot. Claim 6 recites that the support rail has more than one threaded hole for the accommodation of more threaded fluid connections. At least one of these fluid connections is in claim 1 for transferring fluid material to and from plate-like microcomponents, where chemical reactions occur within the microcomponents. Clearly, claim 6 is allowable over Millot et al. '698 for the same reasons as claim 1.

New claim 8 specifically identifies the configuration of the plate-like microcomponents comprising plain parallel plates superimposed on one another. Support for this recitation occurs in the third complete paragraph of page 1. New claim 9 is a combination of the subject matter of claim 8 with initially presented independent claim 1 and dependent claim 2. Claims 10-14 parallel claims 3-7, but are dependent either directly or indirectly from new claim 9.

In that this is a full and complete response to the Office Action of December 23, 2003, this application is now in condition for allowance. If the Examiner for any reason feels a personal conference with Applicants' attorneys might expedite prosecution of this application, the Examiner is respectfully requested to telephone the undersigned locally.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,


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